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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,941	09/28/2005	Bjorn Landfeldt	P17716-US2	4612

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ERICSSON INC.
6300 LEGACY DRIVE
M/S EVR 1-C-11
PLANO, TX 75024

EXAMINER
EMDADI, KEYVAN

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/550,941	LANDFELDT ET AL.
	Examiner	Art Unit
	KEYVAN EMDADI	4141

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 August 2003*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-24* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *08 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
        1.☐ Certified copies of the priority documents have been received.
        2.☐ Certified copies of the priority documents have been received in Application No. _____.
        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/28/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   This is responsive to the communication filed on 8/8/2003. Claims 1-24 represented "method and system for centrally allocating addresses and port numbers"

2.   Claims 1-24 are pending.

3.   Claims 1-24 are rejected.

Drawings

4.   Drawings filed on 8/8/2003 have been acknowledged by the examiner.

Information Disclosure Statement

6.   The information disclosure statement (IDS) submitted on 9/28/2005 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner

Claim Rejections – 35 USC 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that   form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8.   Claims 1-3,7-11,15,16-17,19-20,23 are rejected under 35 U.S.C. 102(b)
        as being anticipated by Johnson et al. (US Pub. No. US2003/0084162
        A1).

As per claim 1: Johnson discloses:

**- A method for enabling establishment of a connection between a node of
an inside address realm and a node of an outside address realm through
an intermediate communication gateway having a pool of outside-realm
gateway addresses for outside- realm representation of inside-realm
nodes, said method comprising the steps of:**

  **- centrally allocating, in response to a configuration request initiated
  from said inside-realm node, an outside-realm gateway address from
  said pool of gateway addresses and an inside node port number for
  said inside-realm node,**

  (Johnson, Paragraph 23, lines 2-6, Paragraphs 70-71, and figures 3,6) a
  centrally allocated table of addresses and pathway connection information
  provides addresses and port connection information in response to a
  node configuration request from an inside realm node.

  **- wherein said step of centrally allocating comprises the step of
  identifying, based on predetermined connection information
  derivable from said configuration request, an outside-realm gateway
  address and an inside node port number that in combination with
  said predetermined connection information define an outside-realm
  gateway state representation that has no counterpart in any existing
  gateway connection state;**

  (Johnson, Paragraph 23, lines 2-6, Paragraphs 70-71, and figures 3,6) a
  centrally allocated table contains predetermined connection information
  that is received by a source device that initiates a connection request.

- initiating establishment of said connection at least partly based on the allocated outside-realm gateway address and inside node port number,

(Johnson, Paragraph 23, lines 2-6, Paragraphs 70-71, and figure 6) a source device initiates a connection with a device on a different realm using the connection information stored on an available table, including communication pathways to the device on the other realm and the devices address.

- and transmitting the allocated outside-realm gateway address and inside node port number to the requesting inside-realm node in a configuration reply.

(Johnson, Paragraph 23, lines 4-8) the connection procedure communicates address information to the source device.

As per claim 2: Johnson discloses:

- The method according to claim 1, wherein said predetermined connection information includes at least one of outside node address information and outside node port information. (Johnson, Paragraph 23, lines 2-5, Paragraphs 70-71, and figure 6) the described table contains addresses and ports in the global address list that are for outside nodes.

As per claim 3 Johnson discloses:

- The method according to claim 1, wherein a gateway connection state is established in said gateway based on said outside-realm gateway state representation and a representation of an inside-realm routing path between said gateway and said inside-realm node. (Johnson, Paragraph 23, lines 2-5) device connection states are centrally allocated on a table that contains their state representation and associated communication pathways.

As per claim 7 Johnson discloses:

**- The method according to claim 1, further comprising the step of said
inside-realm node configuring a communication interface according to said
allocated outside-realm gateway address and inside node port number.**
(Johnson, Paragraph 2, lines 9-12) port address translation is described where
the gateway maps one of its outside-realm ports containing an outside-realm
address to an inside node port.

As per claim 8 Johnson discloses:
**- The method according to claim 1, further comprising the step of
establishing an inside-realm routing path between said gateway and said
inside-realm node.** (Johnson, Paragraph 2, lines 9-12) port address translation
is described where the gateway maps one of its ports to an inside realm node
thereby establishing an inside realm routing path between itself and the node.

**As per the system claims 9-11,15, these do not teach or define any new
limitations above method claims 1-3, 8 and are rejected for similar reasons.**

As per claim 16 Johnson discloses:
**- A gateway resource manager for a communication gateway, said
communication gateway having a pool of outside-realm gateway addresses
for outside-realm representation of inside-realm nodes, said gateway
resource manager comprising:**
>   **- means for allocating an outside-realm gateway address from said
>   pool of gateway addresses and an inside node port number to be
>   used in establishing a gateway connection state for a flow between
>   an inside-realm node and an outside-realm node,**
>   (Johnson, Paragraphs 54 and 55, Fig. 2) the address server
>   communicates the private devices public address and private port to the
>   outside device which is used to establish a peer to peer connection
>   between a public device and private device.

- wherein said allocating means comprises means for identifying, based on predetermined connection information, an outside-realm gateway address and an inside node port number that in combination with said predetermined connection information define an outside-realm gateway state representation that has no counterpart in any existing gateway connection state;

(Johnson, Paragraphs 54 and 55, Fig. 2) the address server communicates the private devices public address and private port to the outside device which is used to establish a peer to peer connection between a public device and private device. The address server communicates a private devices connection information from the device access mapping table to said private device. The private device then communicates this pre-determined information to other devices.

- means for initiating establishment of said gateway connection state at least partly based on the allocated outside-realm gateway address and inside node port number;

(Johnson, Paragraphs 54 and 55, Fig. 2) the address server communicates the private devices public address and private port to the outside device which is used to establish a peer to peer connection between a public device and private device. The private device in this context would be the gateway.

- and means for transmitting the allocated outside-realm gateway address and inside node port number to said inside-realm node.

(Johnson, Paragraphs 54 and 55, Fig. 2) the address server communicates the private devices (the outside realm gateways) public address and private port to the outside device.

As per claim 17, it does not teach or define any new limitations above claim 2 and is rejected for similar reasons.

As per claim 19 Johnson discloses:

- The gateway resource manager according to claim 16, wherein said means for initiating establishment of said gateway connection state comprises means for requesting that said gateway establishes a gateway connection state based on said outside-realm gateway state representation and a representation of an inside-realm routing path between said gateway and said inside-realm node.

(Johnson, Paragraphs 44 lines 1-5, Paragraph 45 lines 1-4 and Paragraph 47 lines 1-3, and Fig. 1) the address server (gateway resource manager) receives a datagram from a private device causing a route to be created on the NAT table for the said device. The address server responds to the initial datagram by creating a corresponding entry into the access mapping table which is on the outside realm. The address server contains stored access information and routing paths to private devices on the inside realm.

As per claim 20 Johnson discloses:

- The gateway resource manager according to claim 16, wherein said allocating means performs allocation in response to a configuration request initiated from said inside-realm node, and said transmitting means transmits the allocated outside-realm gateway address and inside node port number to said inside-realm node in a configuration reply.

(Johnson, Paragraph 66 lines 1-10, and Fig. 1) the address server (gateway resource manager) responds to determining that the datagram message is not represented in the device access mapping table. The server creates an entry in the mapping table that includes the private devices private address, the private devices private port, and the public address of the gateway.

As per claim 23 Johnson discloses:

- A method of configuring an inside-realm communication node for communication with an outside-realm communication node via a

communication gateway having a pool of outside-realm gateway
addresses for outside-realm representation of inside-realm nodes, said
method comprising the steps of:

> **- centrally allocating an outside-realm gateway address from said**
> **pool of gateway addresses and an inside node port number for said**
> **inside-realm node,**
>
> (Johnson, Paragraph 23, lines 2-6, Paragraphs 70-71, and figures 3,6) a
> centrally allocated table of addresses and pathway connection information
> provides addresses and port connection information in response to a
> node configuration request from an inside realm node.
>
> **- wherein said step of centrally allocating comprises the step of**
> **identifying, based on predetermined connection information, an**
> **outside-realm gateway address and an inside node port number that**
> **in combination with said predetermined connection information**
> **define an outside-realm gateway state representation that has no**
> **counterpart in any existing gateway connection state;**
>
> (Johnson, Paragraph 23, lines 2-6, Paragraphs 70-71, and figures 3,6) a
> centrally allocated table contains predetermined connection information
> that is received by a source device that initiates a connection request.
>
> **- transmitting the allocated outside-realm gateway address and**
> **inside node port number to said inside-realm node; and**
>
> (Johnson, Paragraph 23, lines 2-6, Paragraphs 70-71, and figure 6) a
> source device initiates a connection with a device on a different realm
> using the connection information stored on an available table, including
> communication pathways to the device on the other realm and the devices
> address. The required connection information for the connection is
> transmitted to the source device node that requested the connection.
>
> **- configuring said inside-realm communication node according to the**
> **allocated outside-realm gateway address and inside node port**
> **number.**

(Johnson, Paragraph 23, lines 4-8, and paragraph 54) the connection
procedure communicates address information to the source device.
The address server communicates a private devices outside realm
gateway address and inside port number, to an outside device.
The gateway address and inside port number are then configured to
establish a peer to peer connection.

Claim Rejections – 35 USC 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for
all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set
forth in section 102 of this title, if the differences between the subject matter sought to be patented and
the prior art are such that the subject matter as a whole would have been obvious at the time the
invention was made to a person having ordinary skill in the art to which said subject matter pertains.
Patentability shall not be negatived by the manner in which the invention was made.

10.   Claims 4-6, 12, 13, 14, 24 are rejected under 35 U.S.C. 103(a) as being
unpatentable over Johnson et al. (US Pub. No. US2003/0084162 A1) in
view of Alkhatib (Pub no. US 2002/0184390 A1).

**As per claim 4 claim 1 is incorporated, Johnson does not specifically teach
wherein the allocated outside-realm gateway address and inside node port
number are represented by an allocated socket network address and a
source port number, and the predetermined connection information
includes a destination network address and a destination port number, and
the outside- realm gateway state representation is defined by a unique set
of socket parameters including the allocated socket network address and
source port number, the destination network address and the destination
port number.** However Alkhatib discloses the claim limitation **wherein the
allocated outside-realm gateway address and inside node port number are**

represented by an allocated socket network address and a source port number, and the predetermined connection information includes a destination network address and a destination port number, and the outside- realm gateway state representation is defined by a unique set of socket parameters including the allocated socket network address and source port number, the destination network address and the destination port number (Alkhatib paragraph 45 10-14) socket addresses are used to make a connection.

It would have been obvious to one skilled in the art at the time of invention to incorporate the capability to represent socket network addresses and port numbers into the invention described by Johnson to have the flexibility to use sockets to represent ports and network addresses.

As per claim 5 claim 1 is incorporated Johnson does not specifically teach wherein said configuration reply is a DNS (Domain Name Server) reply. However Alkhatib discloses the claim limitation **wherein said configuration reply is a DNS (Domain Name Server) reply.** (Alkhatib paragraph 45 10-14) the operating system receives a reply from a DNS server.

It would have been obvious to one skilled in the art at the time of invention to incorporate the DNS server into the invention described by Johnson to have the flexibility to have a DNS server in the network.

As per claim 6 claim 5 is incorporated but Johnson does not specifically teach wherein said allocated outside-realm gateway address and inside node port number are conveyed in a dedicated DNS record in said DNS reply. However Alkhatib discloses the claim limitation **wherein said allocated outside-realm gateway address and inside node port number are conveyed in a dedicated DNS record in said DNS reply.** (Alkhatib paragraph 45, lines 21-26) the operating system retrieves a domain name from a DNS server through

reverse DNS lookup, the TRACERT command can easily be used to determine the gateway(s) and nodes once the domain is retrieved.

It would have been obvious to one skilled in the art at the time of invention to incorporate the DNS reply that enables the determination of the gateway(s) and node information into the invention described by Johnson to gain the benefit of having access to said information.

As per the system claims 12-14, these do not teach or define any new limitations above method claims 4-6 and are rejected for similar reasons.

As per claim 18, it does not teach or define any new limitations above claim 4 and is rejected for similar reasons.

As per claim 21-22 they do not teach or define any new limitations above claims 5-6 and is rejected for similar reasons.

As per claim 24 Johnson discloses:
- An inside-realm communication terminal arranged for communication with any of a number of outside-realm hosts via a communication gateway having a pool of outside-realm gateway addresses for enabling outside-realm representation of inside-realm communication terminals, said communication terminal comprising:

> **- means for configuring a communication interface according to said outside- realm gateway address and said terminal port number.**
> (Johnson, Paragraphs 54 lines 4-9, Fig. 2) the user interface terminal can be used to view and configure host information via the global address list "pool".   This would be accomplished using the outside-realm gateway address and to access the appropriate device.

> Therefor, it would have been obvious to one skilled in the art at the time of invention to incorporate this capability into the invention described

by Johnson in to gain the ability to configure a communication interface
according to outside- realm gateway address and terminal port numbers.
**- means for requesting, central configuration for communication with
a selected one of said outside-realm hosts; means for receiving a
configuration reply including an allocated outside-realm gateway
address and an allocated terminal port number, said allocated
outside-realm gateway address and said allocated terminal port
number.**
(Johnson, Paragraph 23, lines 2-6, Paragraphs 70-71, and figures 3,6) a
centrally allocated table of addresses and pathway connection information
provides addresses and port connection information in response to a
node configuration request from an inside realm node. The procedure
receives a communication request, and communicates a global address
list to the requesting device thereby allowing the first device to establish a
connection with an outside realm host.

Therefor, it would have been obvious to one skilled in the art at the
time of invention to combine this central configuration for communication
with an outside realm host into invention described by Johnson in to gain
the ability to centrally configure and communicate with hosts.
However, Johnson does not specifically teach:
**- in a modified DNS (Domain Name Server) query…DNS…being
arranged in a dedicated DNS record in said configuration reply.**
However Alkhatib discloses the claim limitations:
**- in a modified DNS (Domain Name Server) query…DNS…being
arranged in a dedicated DNS record in said configuration reply.**
(Alkhatib paragraph 61) requests queries are made of the described DNS
server.

Therefor, it would have been obvious to one skilled in the art to
combine this DNS query type configuration request capability into the

invention described by Johnson in to gain the ability to perform configurations via a DNS query.

Conclusion

11.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEYVAN EMDADI whose telephone number is (571)270-7320. The examiner can normally be reached on Monday-Thursday 7:30AM to 5:30PM EST, Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on 571-272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-6703.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KEYVAN EMDADI/
Examiner, Art Unit 2448
Date: January 22, 2009

/FIRMIN BACKER/
Supervisory Patent Examiner, Art Unit 2448